

ORIGINAL RESEARCH PAPER

Comparative analysis between qualitative norms of ancient Iranian urbanism and western urban design approaches

F. Heidari, M. Sattar zad Fathi*

Department of Urban Design, Faculty of Architecture and Urbanism, Imam Khomeini International University, Qazvin, Iran

Received 4 December 2016; revised 3 February 2017; accepted 20 March 2017; available online 1 April 2017

ABSTRACT: The rich identity, originality and validity of the “Ancient Iranian Urbanism and Architecture”, always have been stimulating the urban designers and planners to have research about their valuable qualities and historical principles. Unlike the past, today’s Iranian cities have inefficient urban qualities; because they are inspired by the western urban designs, without paying attention to their contents and contexts, which have destroyed the originality and identity of them. So in this research, to achieve more efficient urban design solutions, is tried to revive the concepts and principles of the ancient Iranian urbanism. Also, according to globalization and urban commonalities, the main attempt is to find the overlaps and common qualitative norms between the western contemporary urban design approaches and the ancient Iranian urbanism principles. Due to this, by utilizing the comparative and descriptive methods, is tried to have research in theoretical resources to suggest some comprehensive principles, in order to reach an appropriate concept for the implementation of urban design projects in Iran, which may revive the original Iranian contextualism. This research will create a linkage between innovations of the western urbanism approaches and values of the ancient Iranian urbanism principles to have a prospective and more accurate understanding of the Iranian urban developments.

KEYWORDS: *Ancient Iranian Urbanism; Contextualism; Structuralism; Urban Resilience; Urban Sustainability*

INTRODUCTION

After the Second World War (1939-1945), due to the need of urban reconstructions in the European countries, some modern and immediate urban development policies became common. For example, by implementation of Le Corbusier’s designs, the urban life and social interactions simultaneously faded, which had an extremist focusing on the vehicular access, zoning, universal architecture, mass against space and lack of public places (Pakzad, 2011). One of his influences on urban development was Brasília that planned and developed by Lúcio Costa and Oscar Niemeyer in 1956, like an architectural masterpiece, but

an urban tragedy (Ghobadian, 2014). These types of urban shortcomings were challenged at the 60s A.D by several urban theories, specifically in various forms of anthropological, social, cultural and natural tendencies (Pakzad, 2011). Gradually, with inefficiency of the modern urbanism principles, some new approaches were raised in Europe, such as “Localism”, “Pluralism”, “Neorationalism”, “Free Architecture” and “Neoclassicism”. Nowadays, contemporary architecture and urbanism should have a trend of citizen orientation and transparency (Ghobadian, 2014; Tibbalds, 2004). During the modern era, some trends like “Metabolism” and “Structuralism” only rejected some modern urbanism principles, but after transition

*Corresponding Author Email: fardinheidari91@yahoo.com
Tel.: +98 935 639 0533; Fax: +98 26 3650 6378

into the postmodern era, these were completely rejected. These totalitarian principles were “Purism”, “Functionalism”, “Elitism”, “Objectivism”, “Standardization” and “Historical Deterioration” (Pakzad, 2011; Golkar, 2012). The familiarity of the Iranians with the western urbanism and architecture, occurred 150 years ago in the Nasser era when Tehran urbanism and architecture inspired by the western developments, and after that, in the Pahlavi era, the modernization of the urbanism systems was begun (Habibi, 2008). During these 150 years, the inspiration of the Iranian urbanism and architecture was only superficial, instead of contextual and conceptual forms.

Current Iranian cities are confusing between tradition and modernism and many of the Iranian urban changes, actions and designs are imitative, anonymous and unrelated to the Iranian context (Kamrava, 2013).

By historical consideration of different urbanism approaches in the world, it can be seen that their norms and principles have many link points with the ancient Iranian urbanism; such as urban sustainability, resilience, contextualism, structuralism, behaviorism, new urbanism, etc. By studying the history of the Iranian cities, a simple urban system appears which has a timely supporting of diverse spatial qualities and different citizenship needs. In most samples, current Iranian cities have no identity and personality. Somehow, the main reason of this matter is considering some schemes which are inappropriate and irrelevant to the Iranian originality, without any contextualism (Shieh, 2010). The historical and ancient Iranian cities were compact, continuous, vibrant, dynamic, sustainable, human oriented, field oriented, original, participatory, meaningful, rich and powerful supporter of public life (Habibi, 2008; Tavassoli, 1997). Here in this research, to restore these qualities is tried to find some common roots between the ancient Iranian urbanism (also the architecture) and western urban design approaches which are prevalent in the world, to provide a relevant framework for the urban systems in Iran. This framework can be used in the Iranian urban designs and also can solve future problems of our cities. The simultaneous combination of these two trends can help to bring back the contextual urban nature and identity in the Iranian cities. This is considered as the main solution in this research for preparing some vital opportunities to resolve today's urban shortcomings in the Iranian urban areas, which may be used as a theoretical approach in urban design processes.

MATERIALS AND METHODS

The materials have been prepared in the form of theoretical investigations and analysis. Hence, by utilizing the comparative and descriptive methods, is tried to have an investigation into the theoretical resources. Initial findings are obtained from researching through pictures, maps and table analysis, which will show us the similarities and overlaps to get more acquainted with the western urban implementations and trends, of course, suitable for use at existing Iranian urban areas. At the following have been paid to these issues, more in details, to reach some valuable and effective materials:

Structuralism and ancient Iranian urbanism

The urban structuralism was raised as a concept in 1960 in Europe, which challenged the modern architecture and urbanism. In this approach, the main focus was on cultural and pluralistic architecture and also social life, identity, inclusiveness, collectivism, flexibility and openness (Frausto and Hauvel, 2013). Aldo Van Eyck was one of the most important persons of this tendency, who propounded the “Aesthetics of Number” as a linkage between environmental components (Pakzad, 2011). The structure is a set of interdependent relations and processes between elements; in other words, the structure is a network of relations among positions of the elements, which emerges as an outward appearance or a form (Zarabadi et al., 2013). Over time, some structuralist groups like Team 10 and Metabolists, considered a main structure for every city that was created by the urban experts (the main structure contained infrastructural complexes) and also a secondary structure which was shaped by the people (Fig. 1). They considered the city as a living organism such a component-oriented concept in designing. In their approaches, public urban spaces were considered as connecting elements between main and secondary structures. They divided the city into three parts: houses, streets and communities, which were connected to each other by doorsteps and public spaces (Bahrainy et al., 2009).

The ancient Iranian cities had main and secondary structures too (Fig. 2). Bazaar as a marketplace was a vital urban element that had a structural role in building the main body of the city with a suitable height system (Shieh, 2010). It was also a traditional public space that was not only the commercial center of the traditional cities in Iran but simultaneously was the center of

social, cultural, political and religious activities (Mohammadi Kalan and Oliveira, 2015). The Bazaar was formed at the first steps of the ancient Iranian urban development, and after that, other elements of the city were constructed spontaneously, by the public participation. Iranian communities and neighborhoods always had a secondary role in urban structures (Habibi, 2008). So, the importance of this section in this debate is paying attention to the role of communications and people's movements in the formation of the Iranian cities. Actually, Bazaar created the mobility and linkage between other urban components (Fig. 2), like today's social streets. The ancient Iranian cities had hierarchical

structures that contained: houses, sub and main passages and neighborhoods. These components were connected to each other continuously, through some public spaces like Meydan, Bazaar, Mosques and Doorsteps (Fig. 3). These elements supported public and social life through mixed-use places which strengthened the urban identity (Mashadizadeh Dehaghani, 2011). For example, Meydan was an Iranian public square and emerged as a predetermined and necessary public space. It was a place for not only public gatherings and commerce but also a focal point for the manifestation of power, both religious and political (Ebrahimi, 2009).

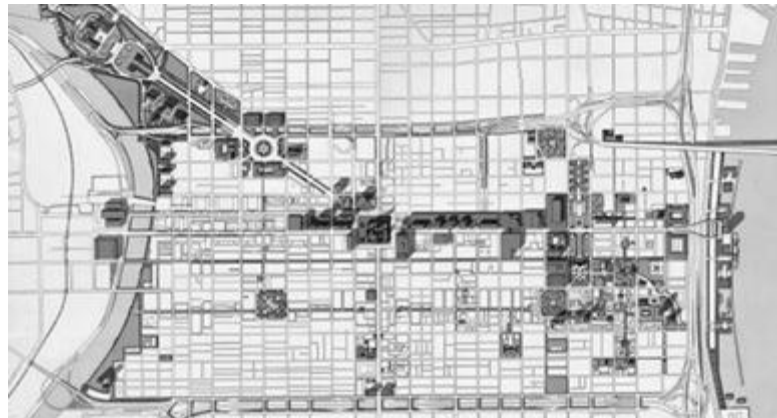


Fig.1: Philadelphia's site plan as one of the samples of the western urban structuralism (Heller, 2013)

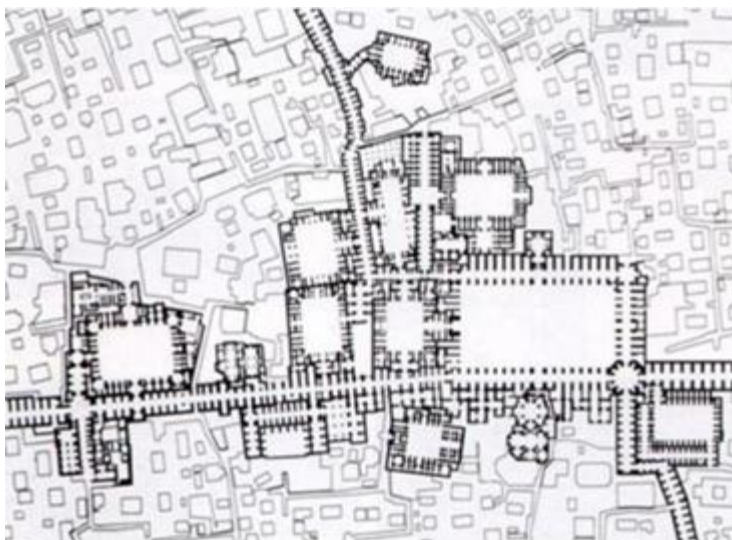


Fig. 2: The Bazaar (market) and public spaces such as the main structures of the ancient Iranian city (Hamidi et al., 1997)



Fig. 3: Doorstep as the spatial connector (Dani, 2005)

Perceptualism, behaviorism and ancient Iranian urbanism

These two approaches were raised in the second half of the 20th century such as an environmental design for highlighting users' behavioral tendencies and their perceptions. According to environmental possibilism, these approaches tried to reject deterministic trends in urban design (Nari Ghomi and Abbaszadeh, 2014). Actually, the origin of these attitudes was environmental psychology, which underlined on mutual environmental and humanistic impact. In perceptualism, the receiver is a part of environment's nature, who has personal behaviors and goals and also plays an important role in defining the environment (Gholizadeh et al., 2015). Environmental perception is a process that based on the combination of sensorial information and experimental expectations, which through it, the humans choose the adequate data according to their psychological needs (Emamgholi et al., 2012). Kevin Lynch was one of the first experts who paid attention to the users' perceptions in urban design; by attention to Fig. 4, he has mentioned five elements in every city for shaping the city image, which include: paths, edges, districts, nodes and landmarks (Lynch, 1960).

Nowadays the sensorial experiences are central to the design of urban environments. Academic writing on the design of post-industrial urban change has focused from its earliest texts on the impact of the visual form of urban projects to the impact of the

perceptual form of them (Degen and Rose, 2012). Perceptualism reads the city from the mentality of every citizen and transfers the objectivity to subjectivity, and due to this, the humanistic activities are in relation to the culture. These trends create proportional places for users' needs, through the pedestrian orientation, mixed land uses, citizenship participation, quality orientation, legibility, plazas, communities and the urban network (Bahrainy et al., 2009). The ancient Iranian cities, had also prominent types of Lynch's perceptual elements; these were historical, functional and religious types, like mosques, minarets, windwards, axes and other important elements, which were recognizable as landmarks in the city (Fig. 5). The Bazaar acted as a path which brought a powerful access to citizens, and districts had highlighted the conceptual borders with a specified identity, which increased ingravity. In many of the Iranian cities some natural and artificial elements, like mountains, rivers, city walls and etc., were considered as edges (Tavassoli and Bonyadi, 2007). Also, nodes were defined as social places, like Meydan and Charsoogh (Mashadizadeh Dehaghani, 2011; Mahmoudi and Fanaei, 2009). Generally, as can be seen in Fig. 6, the ancient Iranian city had a legible, distinguished and full of identity structure. Also, public urban spaces were pedestrian oriented, mixed-use and continuous, with a protection of diverse social behaviors in various patterns and settings.

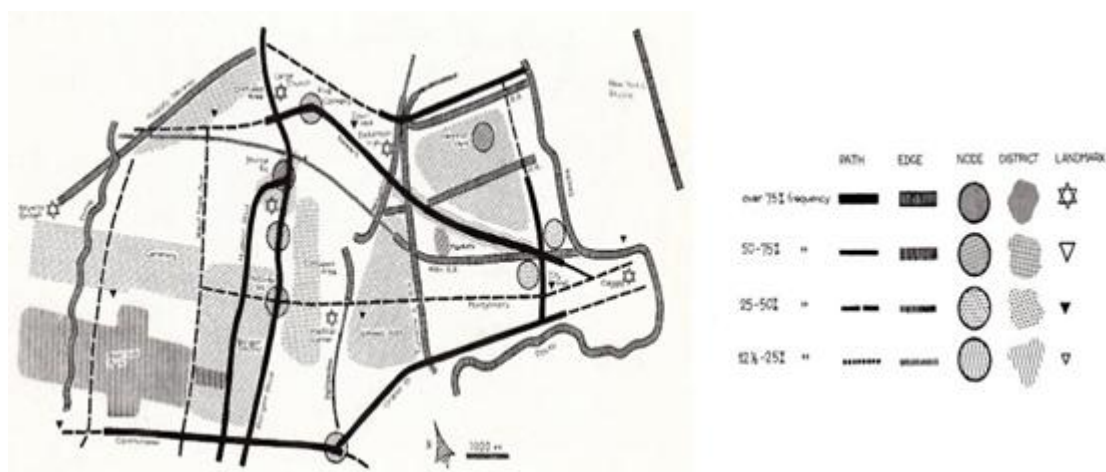


Fig. 4: Lynch's quintuple elements (Lynch, 1960)

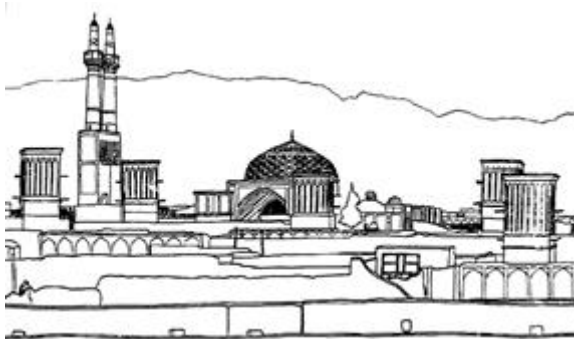


Fig. 5: Urban landmarks in the structure of the ancient Iranian cities (Tavassoli and Bonyadi, 2007)



Fig. 6: Yazd, Iran (Tavakoli, 2010)

Contextualism and ancient Iranian urbanism

Context means a set of situations or facts, which covers conditions or circumstances; it shows the identity and the original background of something and helps to understand about it. The context is the ground and the environment in which architecture happens there and covers the content and the form (Figs. 7 and 8).

Contextualism as one of the most common views in the urbanism considers the current context as a historical event, which the city elements are known, discussed and made within that. At the first steps, this view only considers the physical aspects, but gradually turns into the human dimensions and strengthens the social and cultural trends (Tabarsa and Naseri, 2017).

Contextualism, as it is well known, came from the desire to resolve the local and endemic problems; it tries to create the harmony between historical environments and the placement of new buildings, which was apparent throughout the postmodernism. It is such a development that makes a platform for common discussions, in both architecture and urban design; through this, also creates a sustainable bridge between these two different fundamental scales (Çizgen, 2012).

Step by step, in addition to the historical contextualism, some issues have been raised like: traditionalism, people orientation, mutual respect between natural and artificial contexts, localism and connection with the past. The contextualism has different aspects, such as environmental, physical, social and cultural dimensions, which have some famous theorists like Roger Trancik, Collin Rowe, and

Francis Tibbalds (Pakzad, 2010). Generally, today's contextualism is an opportunity for linking the urban fabric and its context to each other as a piecemeal design to create an urban balance, by using the endemic elements which are existing in the current contexts to reach a better humanistic and mental qualities (Tibbalds, 2004; Trancik, 1986; Rowe and Koetter, 1978). The ancient Iranian cities were shaped in accordance with the climatic, social, physical, political, economic and environmental contexts (Fig. 9); also the Iranian architecture, always had a deep respect to positional conditions and climates (Fig. 10). Furthermore, the ancient Iranian cities and urban spaces were made according to the humanistic matters, like vitality, scale and legibility. The Iranian urban spaces also supported the controlling changes and lasting environments; but unfortunately, these qualities and concepts are neglected in current Iranian urban designs, plans and also at the whole of urban developments. In this case, the contextualism has been fading in metropolises. As a result, urban requisiteness is rejected, because of not paying attention to the balance between historical and contemporary urban contexts.

New urbanism and ancient Iranian urbanism

“New Urbanism” or traditional design of neighborhood units, was raised as one of the newest programming approaches in urban design and suburbs of American cities, which had been formed in the 80s and 90s of the 20th century. This movement, is such a new outlook of urban development, one of the widespread attempts to solve the problem of wear and



Fig. 7: Awaji Yumebutai, Japan (Erzen, 2004)



Fig. 8: Manarola, Cinque Terre, Italy (Chensiyuan, 2017)



Fig. 9: Uraman, Iran (Molanaei and Soleimani, 2016)



Fig. 10: Abyaneh, Iran (Mahdavinejad *et al.*, 2011)

tear of the urban centers and unsustainability of suburbs of metropolises and big cities (Rahnama *et al.*, 2012). This approach has some important executive details that can be seen in Fig. 11: walkability, connectivity, mixed using and diversity, mixed housing, quality architecture and urban design, traditional design, transect planning, increased density, smart transportation, sustainability and life qualities promotion (CNU and HUD, 2000). It should be mentioned that some of the new urbanism principles are associated with modern cities of the world, but there are some principles in this approach that are so close with the Iranian urbanism too. These are evident in the nature and essence of our ancient urban design principles. Now it can be seen that there are some criteria

for the Iranian community design which have related to New Urbanism, like urban designs and architectures of Isfahan that include: pedestrian and community orientation, mix using, social interactions and also many of spatial qualities (Fig. 12), such as hierarchy, continuity, unity and diversity (Latifi and Safarichabok, 2013); also, in addition to Isfahan city, all of these qualities are visible in many of the ancient Iranian cities such as Yazd, Kashan, Shiraz, etc. These valuable criteria always were applied carefully and were functioned correctly in relation to the contents and contexts of that time's cities. In example, to reach better urban qualities like spatial hierarchy, the heterogeneity and preferability principles were used (Tavassoli, 1997).



Fig. 11: Manget Street, Marietta, Georgia (Tsw-design, 2013)

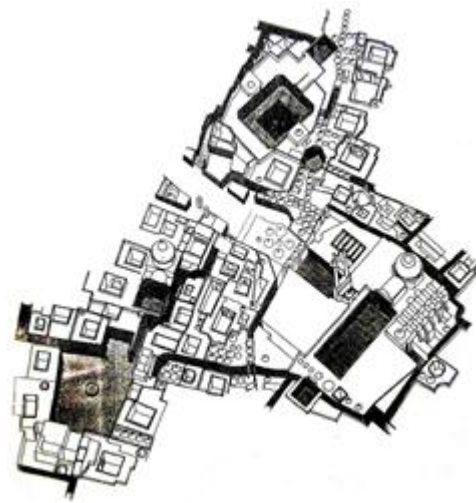


Fig. 12: An example of continuous, hierarchical and heterogeneous public spaces in the ancient Iranian cities (Tavassoli, 2002)

Urban sustainability and ancient Iranian urbanism

This approach was raised in the late 80s A.D and reached a peak in the 90s A.D. Nowadays, this is continuing in the western urban designs as a responsive and perfect solution for today's urban problems (Golkar, 2011). There are three important concepts about sustainability which are "Ecological Integrity", "Social Justice" and "Economic Prosperity"; correct implementation of these concepts will lead to the high quality of life, balanced density, vitality, dynamism, originality, economic and cultural identity, citizenship responsibility, participatory management, internal potentials, natural design, diversity and also prevention from urban sprawl in urban developments (Krizek and Power, 1997).

Also, UN-Habitat in its third discussion in 2016, has introduced five principles for creating a sustainable neighborhood; these are adequate designing of urban streets, efficient access system, high density, mixed land uses, social mixing and limited land use specialization. The UN-Habitat has briefed these five principles into three key features: vibrant street life, walkability and affordability (UN Habitat, 2016). The ancient Iranian cities had a responsive system that tried to make harmony with nature, for reducing natural and environmental damages. In fact, natural and man-made components, delicately joined together; these types of designs always used endemic and local skills (Tavassoli, 2002). The ancient Iranian cities highlighted

the economic and cultural identities that prepared many internal potentials to support the economic prosperity and efficiency, like Bazaar. So, this type of designing always created a good social justice, through the local communities, which usually provided fairly facilities for citizens; where generally the extensive range of social classes lived in (Habibi, 2008). So, the ancient Iranian cities have many overlaps with the urban sustainability principles, like vitality, dynamism, high density, participatory management, meaning, originality, etc.

Urban resilience and ancient Iranian urbanism

Resilience is an ability of the city, community or society to resist the hazards, promptly and efficiently. A resilient community helps to encounter with the urban disturbances and changes, and retains basic structures and provides efficient services. As a concept, resilience can be applied to any community and any kind of natural or man-made disturbances. The urban resilience can prevent from many of urban shortcomings, like disasters, risks, uncertainties and complexities. It has some sections like disaster risk management, social resilience, land use planning, urban ecosystems, urban upgrading and incorporating resilience into the project cycle (Jha et al., 2013). This concept recently has been actively undertaken by cities around the world and has been existing in the scientific literature since the 70s A.D, and research on urban ecology. It also engages with the urban complexities,

socio-ecological systems and their vulnerabilities (Frantzeskaki, 2016). In Table 1, the main dimensions and components of this concept have been displayed.

It is concluded that there is a close relationship between the ancient Iranian urbanism and the urban resilience, in all sections and dimensions; this affinity was originated from the religious laws, geographical coordinates and Iranian worldviews. The existence of social and political capitals in the ancient Iranian cities prepared a stable political system that has always supported self-sufficiency and applicability and created a powerful sense of personalization, participation, social identity and justice. The ancient Iranian cities provided good and systematic infrastructures like

public urban facilities, vital centers and arteries. Also, these cities had sustainable, stable and powerful economic identities, due to the internal potentials which relied on some elements like Bazaar (Farzad Behtash *et al.*, 2011; Pazhuhani *et al.*, 2015). In these cities, respect to nature caused lowest vulnerabilities in the case of dangers and disasters. Moreover, the endemic architecture and attention to the climatic conditions brought powerful resiliency. The balance between masses and spaces, mixed land uses, the existence of the continuous open spaces and main and secondary structures, were the important principles of this concept which increased the resiliency of the ancient Iranian cities (Tavassoli, 2002).

Table 1: Dimensions and components of urban resilience (Farzad Behtash *et al.*, 2013)

| Concept | Dimensions | Components |
|------------------|---------------------|---|
| Urban Resilience | Risks Reduction | Comprehensive Emergency Management Plan\ Vulnerability and Risk Assessment\ Compliance with Regulations and Standards\ Risk Taking Potential\ Risks Insurance\ Training and Maneuver\ Documentation\ The Role of Government and Urban Management |
| | Infrastructural | Vital Arteries\ Important Vital Centers\ Public Facilities\ Urban Facilities\ Dangerous Facilities |
| | Structural-Physical | Residential, Commercial, Industrial and Educational Land uses\ Historical Buildings and Sites\ Community Cohesion\ Urban Form, Physic and Fabric\ Mass and Space |
| | Environmental | Environmental and Natural Resources Diversity\ Environmental Sustainability\ Geographical Specifications |
| | Socio-Cultural | Beliefs and Religion\ Social and Cultural Capitals\ Social and Cultural Security\ Demographic Factors\ Ethnicity, Race and Language\ Sense of Belonging\ Social Identity\ Family Structure\ Traditions\ Immigration\ Public Participation\ Lessons of Experiences |
| | Economic | Security\ Economic Stability\ Economic Diversity and Dynamism\ Employment Status\ Income\ Ownership |
| | Managerial | System Support\ System Diversity\ System Effectiveness\ System Self-Sufficiency\ System Stability\ System Interdependence\ System Applicability\ Resources\ The Stability of the Political System |

RESULTS AND DISCUSSION

Reaching some common qualitative norms; initial results

In fact, many of the Iranian projects, plans and designs have always been an imitation of other foreign examples which are the world’s newest urbanism concepts. Unfortunately, the Iranian urbanism has minimum relation with today’s values and norms, in urban issues and architecture, and has lost its past common and successful Iranian nature. Actually, the ancient Iranian cities had positive and favorable potentials, which were so endogenous, contextual and conceptual. It should be noted that many of the western qualitative norms, in urban design and architecture, have many unifications and obvious roots in the ancient Iranian urbanism. Some powerful Iranian architectures and urban design approaches like “Isfahan Urbanism School”, obviously had sensible influences on the European urban trends. This is a two-way process that these two historical trends had mutual effects on each other, have completed each other and also imitate from each other. In [Table 2](#), is

tried to conclude and illuminate some vital and common norms and principles between the ancient Iranian urbanism and the western newest urban design approaches.

Codification of some comprehensive principles for Iranian urban design; final results

According to the [Table 2](#), some comprehensive and concluded principles have been suggested, which are appropriate for Iranian contexts. For reaching these, some solutions are mentioned; these principles are up to date with current Iranian urban needs, times and changes, but have a close relationship with the principles and identity of ancient Iranian urbanism. This matter provides the best qualitative norms that are common in western urban design, and also are compatible with Iran’s conditions. These suggested principles are as follows:

Variability and stability

First of all, the managerial and economic systems of a city must be stable and also flexible for more resiliency

Table 2: Common qualitative norms between ancient Iranian urbanism and western urban design approaches; initial results

| Western approaches | Common qualitative norms |
|-------------------------------|--|
| Structuralism | Advanced Social Life/ Appropriate Identity/ Inclusiveness/ Flexibility and Openness/ Considering the Main and Secondary Structures/ Utilizing Public Spaces and Doorsteps/ Citizenship Participation/ Spatial Continuity and Hierarchy |
| Perceptualism and behaviorism | Pedestrian Orientation/ Mixed Land Uses/ Spatial Continuity/ Legibility and Ingravibility/ Diverse Social Behaviors/ Spatial and Sensorial Experiencing/ Human Orientation/ Utilizing Lynch's Quintuple Elements/ Creating a Clear City Image |
| Contextualism | People Orientation/ Respecting to the Positional and Climatic Conditions/ Communication of the Tradition and Culture/ Human Scale/ Variability and Adaptation/ Pedestrian Orientation/ Mixed Land Uses/ Durability |
| New urbanism | Community Oriented Design/ Pedestrian Orientation/ Mixed Land Uses/ Spatial Hierarchy/ Spatial Continuity/ Spatial Unity/ Spatial Diversity/ Reflection of Social Relations/ Spatial Heterogeneity/ Spatial Preferability |
| Urban sustainability | Harmony with The Nature/ Endemic Architectural Skills/ Environmental, Social and Economic Self-Sufficiency/ Economic and Cultural Identity/ Economic Prosperity and Efficiency/ Social Justice/ Vitality and Dynamism/ Participatory Management/ Appropriate Meaning and Originality/ Improving the Qualities of Urban Spaces/ High Dense City |
| Urban resilience | The Stability of the Political System/ Self Sufficiency and Applicability/ Strengthening the Social Capital/ Sense of Belonging and Personalization/ Public Participation/ Social Justice/ Social Identity/ Economic Identity and Stability/ Respecting to the Nature/ Attention to the Climatic Conditions/ Balance Between Mass and Space/ Efficient Urban Infrastructures/ Considering the Main and Secondary Structures / Continuous Open Spaces |

and sustainability. In the physical part of a city, main and secondary structures should be considered; the main structure can contain public spaces and facilities, social streets, infrastructures, natural elements and valuable buildings. Also, for reaching appropriate conditions of flexibility and freedom, the construction of districts and management of communities must be assigned to the people for absorbing more citizen participation and involvement. This can be controlled by some construction guides, regulations and social laws.

Spatial continuity and hierarchy

The urban design projects must consider continuous public open spaces in the urban fabrics. In fact, vital components of a city should be linked together with some joints as doorsteps and in-middle spaces; these spaces and vital components should have hierarchical structures. Moreover, the spatial heterogeneity and preferability can help to make the urban spaces and places with different shapes and senses. In addition to open spaces, the main streets must be built continuously for more pedestrian movement, urban vitality and resiliency; this issue will provide strong social interactions in the city.

Diversity

This principle should be applied in different fields. The social section of a city must support diverse needs and interests of the people, to bring diverse behaviors, inclusiveness and social justice. So, the extensive range of social classes must be considered in each community and district of the cities, for reaching pluralistic urban designs and plans. Public urban places must support mixed land uses and diverse activities for reaching more vitality, resiliency, sustainability and dynamism. Moreover, consideration of mixed land uses also will bring positive economic changes.

Identity and originality

The use of endemic and original proportions and elements always bring suitable identity and originality (principle of patterning); this matter doesn't mean superficially utilization. Also by emphasizing on community orientation, the powerful social capitals are obtained with more participation, self-sufficiency, personalization and localism percentages. In addition to special social identity, our cities should have a special economic identity too, of course by according to the local potentials and skills.

Legibility; utilizing Lynch's quintuple elements

Urban designers must pay attention to perceptual elements in their designs for making the powerful and legible city images. In this way, the city nodes can include social and pedestrian oriented places to have a better supporting of the urban qualities. Moreover, highlighting the role of the long social streets in the main structures can empower the elements of paths in today's cities. Also can emphasize on valuable and important buildings and elements by using a suitable height system, such as the urban signs and landmarks. Generally, the communities and neighborhoods of a city should have more powerful sensorial borders for bringing a more sense of belonging and personalization, away from any inflexibility and isolation. Meantime, the artificial and natural city edges always create strong public spaces.

Human orientation

Human orientation must be applied to in all of the urban design projects. For reaching this matter, the pedestrian orientation, human scale, human needs, citizenship rights, freedom and social justice should be supported. Also, the services and facilities must provide equality and inclusiveness. Consequently, human orientation causes to the sensorial and spatial experiences to achieve the perceptual and emotional designs.

Balance of mass and space

This criterion should be used for more urban resilience and environmental comfort. In fact, by creating a balance between masses and spaces, better reactions can be made in times of risks. Moreover, the existence of open spaces creates an opportunity to have more vitality, dynamism and supporting the public life. Specifically, in all urban developments, must be avoided from the dominance of the masses over spaces.

Emphasis on ecopoietic, climatic and natural elements

By regarding the urban sustainability, the endemic architecture, natural elements and contextualism are achievable. The contextual elements as the natural capitals, like mountains, rivers, green and climate zones, bring more environmental comfort, vitality and resiliency to our cities and also prevent from the environmental damages and natural disasters and

catastrophes. The endemic architecture can be supported by local materials, local manpower and parcels orientation which is determined according to the climate. Finally, these issues can bring in more self-sufficiency.

Emphasis on public life

All cities must support powerful public life by strengthening the role of the urban public spaces and places. This issue causes more social interactions, vitality, dynamism, participation and social discourse. These urban spaces should have heterogeneous identities, according to the framework, function and meaning. It will be better that these spaces consider the pedestrian orientation, continuity, mixed using and inclusiveness.

CONCLUSION

The current research provided a better understanding of the combinatorial urban design implementations and how designers can choose appropriate decisions according to the existing circumstances. Specifically, the advanced and pioneer western trends always have many influences on the other countries; although western trends are very effective and successful, but in other circumstances, these tendencies should be used inspirationally instead of implementing without making related changes. Each city should be designed according to its economic, social, political and cultural contexts. So the local and geographical conditions should be considered.

The theoretical investigation through authentic documents showed us many of comparative common points between principles of the ancient Iranian urbanism and the western urban design approaches. Through the reviews and comparative adaptations, some final results were obtained which can be used as main principles to have better urban design interventions with consideration of the current and worldwide theories. This should not be forgotten that the Iranian cities have proper identities, localism, historical values, originality and validity to provide suitable urban environments and encourage to have perfect urban redevelopments. By identifying and empowering these issues, lots of powerful options and capacities will emerge that can be considered as a starting point for taking better urban decisions about the urban actions in Iran. As the final conclusion,

effective western approaches can be useful to promote our urban proceedings through the whole of the country, but this should always be with considering the ancient originality of Iranian urbanization. Naturally, if our designs are suitable for the present conditions, the results will also be quite successful; but in the opposite case, the results will fail. Additionally, urban decisions must be without any of imitations and should aim to encourage the urban designers to have moderated choices.

ACKNOWLEDGMENT

The authors are grateful to the School of Architecture and Urbanism of Imam Khomeini International University, and also some faculty members for their effective suggestions and encouragements for doing this research. Moreover, the valuable comments of anonymous reviewers are thankfully acknowledged.

CONFLICT OF INTEREST

The authors declare that there are no conflicts of interests regarding the publication of this manuscript.

REFERENCES

- Bahrainy, S.H.; Bolooki, B.; Taghabon, S., (2009). Analysis of contemporary urban design theories: from late 19th century to 1970s A.D, University of Tehran Press, Tehran. (In Persian)
- Chensiyuan, (2017). Manarola evening 2012. Wikipedia. Available at: https://commons.wikimedia.org/wiki/File:1_manarola_evening_2012.jpg
- Çizgen, G., (2012). Rethinking the role of context and contextualism in architecture and design, M.S. Dissertation, Gazimağusa, North Cyprus, Eastern Mediterranean University. Available at: <http://i-rep.emu.edu.tr:8080/xmlui/bitstream/handle/11129/348/Cizgen.pdf?sequence=1>
- CNU and HUD, (2000). Creating communities of opportunity: principles for inner city neighborhood design (hope VI and the new urbanism). A collaboration of the Congress for the New Urbanism and U.S Department of Housing and Urban Development.
- Dani, F., (2005). Kucheh Yazd. Wikipedia. Available at: https://commons.wikimedia.org/wiki/File:Kucheh_yazd.jpg
- Degen, M.; Rose, G., (2012). The sensory experiencing of urban design: the role of walking and perceptual memory. *Urban Stud.*, 49(15): 3271–3287 (**17 pages**).
- Ebrahimi, M.H., (2009). Meydan: indeterminate urban spaces in Iranian cities, *Hoviatshahr*, 3(4): 107-120 (**14 pages**). (In Persian)
- Emamgholi, A.; Ayvasian, S.; Zadeh Mohammadi, A.; Eslami, G., (2012). Environmental psychology: the common field between architecture and behavioral sciences (Persian version). *Journal of Behavioral Sciences*, 4(14): 23-44 (**22 pages**).
- Erzen, J.N., (2004). Tadao Ando's architecture in the light of Japanese aesthetics. *J. Fac. Archit.*, 21(1-2): 67-80 (**14 pages**).

- Farzad Behtash, M.R.; Keynezhad, M.A.; Pirbabaie, M.T.; Asgari, A., (2013). Evaluation and analysis of dimensions and components of Tabriz metropolis resiliency. *Honar-Ha-Ye-Ziba*, 18(3): 33-42 (**10 pages**). (In Persian)
- Farzad Behtash, M.R.; Pirbabaie, M.T.; Keynezhad, M.A., (2011). Introduction to the resilience of Islamic cities (In Persian). First National Conference of Islamic Architecture and Urbanism, 11-12 May. Tabriz, Iran (**12 pages**).
- Frantzeskaki, N., (2016). Urban resilience: a concept for co-creating cities of the future. *Resilient Europe*. European Union: European programme for sustainable development.
- Frausto, S.; Hauvel, D., (2013). Open structures; an introduction dossier on Dutch structuralism. Delft University of Technology: Architecture Department & the Berlage Center for Advanced Studies in Architecture and Urban Design & The New Institute Publications.
- Ghobadian, V. (2014). Theories and concept in contemporary western architecture. Cultural Research Bureau, Tehran. (In Persian)
- Gholizadeh, R.; Majidnia, H.; Mohammadi, A.; Heidari, M., (2015). A review of quality and perception of environment in urban design. International conference of architecture, civic engineering and urbanism at the beginning of the third millennium. Tehran, Iran (**10 pages**). (In Persian), Available at: <http://www.shahrsazionline.com/wp-content/uploads/2016/05/shahrsazionline9-1.pdf>
- Golkar, K. (2012). An investigation into the definition of urban design. The Centre for Iranian Urbanization and Architecture Studies, Tehran. (In Persian)
- Golkar, K., (2011). Creating sustainable place; reflections on urban design theory. Shahid Beheshti University Printing and Publishing Center, Tehran. (In Persian)
- Habibi, S.M., (2008). From Shar to Shahr. University of Tehran Press, Tehran. (In Persian)
- Heller, G., (2013). Ed Bacon: planning, politics and the building of modern Philadelphia. University of Pennsylvania Press, United States.
- Jha, A.K.; Miner, T.W.; Stanton Geddes, Z., (2013). Building urban resilience; principles, tools and practice. Environment and sustainable development. World Bank, Washington D.C.
- Kamrava, S.M.A., (2013). Contemporary town planning in Iran, University of Tehran press, Tehran. (In Persian)
- Krizek, K.J.; Power, J., (1997). A planner's guide to sustainable development. American Planning Association, Planning Advisory Service Report, Chicago, IL.
- Latifi, G.; Safarichabok, N., (2013). Regeneration of neighborhood new urbanism principles times in Islamic Iranian cities, *J. Urban Stud.*, 2(8): 3-12 (**9 pages**). (In Persian)
- Lynch, K., (1960). The image of the city. The MIT press MA, Cambridge.
- Mahdavinejad, M.J.; Bemanian, M.R.; Molaee, M., (2011). Architecture in context- inspiration of contextualism in designs. *Naqshejahan*, 1(1): 21-34 (**14 pages**). (In Persian)
- Mahmoudi, A.; Fanaei, K., (2009). Finding new patterns to design sustainable cities by use of traditional urban patterns. *Real Corp 2009-Cities 3.0: smart, sustainable, integrative*. Strategies, concepts and technologies for planning the urban future, 693-703 (**11 pages**).
- Mashhadizadeh Dehaghani, N., (2011). An analysis of urban planning characteristics in Iran. University of Science and Technology Press, Tehran. (In Persian)
- Mohammadi Kalan, A.; Oliveira, E., (2015). The sustainable architecture of Bazaars and its relation with social, cultural and economic components; case study: the historic Bazaar of Tabriz. *Int. J. Archit. Urban Dev.*, 5(4): 5-12 (**8 pages**).
- Molanaei, S.; Soleimani, S., (2016). Recognition of Iranian identity symbols of traditional vernacular architecture in the west part of Iran, Case Study: Uraman. *Armanshahr*, 9(17): 115-127 (**13 pages**). (In Persian)
- Nari Ghomi, M.; Abbaszadeh, M.J., (2014). A pattern for adjustment of behavior in architectural space, according to behavior-physic ideal patterns in Islam; Case study: Airports prayer rooms. *J. Islamic-Iran. City Stud.*, 5(18): 55-66 (**12 pages**). (In Persian)
- Pakzad, J., (2010). An intellectual history of urbanism; from space to place, Vol. 3, Armanshahr publications, Tehran. (In Persian)
- Pakzad, J., (2011). An intellectual history of urbanism; from ideal to reality, Vol. 2, Armanshahr publications, Tehran. (In Persian)
- Pazhuhani, M.; Zayyari, K.; Ghasemzadeh, B.; Qurbani, H., (2015). Urban identity and Iranian new towns. *J. Urban Reg. Anal.*, 7(1): 83-100 (**18 pages**).
- Rahnama, M.R.; Roshani, P.; Hassani, A.; Hosseinpour, S.A., (2012). Use principles of new urbanism approach in designing sustainable urban spaces. *Int. J. Appl. Sci. Technol.*, 2(7): 195-203 (**9 pages**).
- Rowe, C.; Koetter, F., (1978). *Collage city*. MIT Press, Cambridge.
- Shieh, E., (2010). *City and region in Iran*. University of Science and Technology press, Tehran.
- Tabarsa, M.A.; Naseri, Y., (2017). The role of contextualism in architectural design of museums. *J. Hist. Cult. Art Res.*, 6(1): 354-365 (**12 pages**).
- Tavakoli, N., (2010). The role of physical identity of city in urban sustainability, the case study: Yazd, Iran. In 14th international planning history society conference. Technical University Faculty of Architecture and Research Center, Istanbul. (**17 pages**).
- Tavassoli, M., (1997). Principles and techniques of urban design and residential spaces in Iran, Vol. 1, Center for Urban Studies and Architecture of Iran, Tehran. (In Persian)
- Tavassoli, M., (2002). Urban structure and architecture in the hot arid zone of Iran. *Payam and Peyvandeh Nov.*, Tehran. (In Persian)
- Tavassoli, M.; Bonyadi, N., (2007). *Urban space design*, Shahidi Publication, Tehran. (In Persian)
- Tibbalds, F., (2004). *Making people-friendly towns: improving the public environment in towns and cities*. Taylor & Francis, United Kingdom.
- Trancik, R., (1986). *Finding lost space: theories of urban design*. John Wiley & Sons, United States.
- Tsw-design, (2013). *Manget Street: Marietta, Georgia*. Available at: <https://www.tsw-design.com/wpcontent/uploads/2013/09/MangetStreet02.jpg>
- U.N. Habitat., (2016). A new strategy of sustainable neighbourhood planning: five principles. Urban planning discussion note 3. Available at: https://unhabitat.org/wp-content/uploads/2014/05/5-Principles_web.pdf
- Zarabadi, Z.S.S; Imani Alvacheh, H.; Aghamahdi Sarraf, H., (2013). Structural analysis of the city semiology; Case study: Yazd city. *Int. J. Archit. Urban Dev.*, 3(3): 27-38 (**12 pages**).